



## EUROPEAN PATENT APPLICATION

(43) Date of publication:  
10.01.2001 Bulletin 2001/02

(51) Int Cl<sup>7</sup>: H03D 9/04, H04B 1/30,  
H04L 27/233

(21) Application number: 99113262.2

(22) Date of filing: 08.07.1999

(84) Designated Contracting States:  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE  
Designated Extension States:  
AL LT LV MK RO SI

(71) Applicants

- Sony International (Europe) GmbH  
50829 Köln-Ossendorf (DE)
- SONY CORPORATION  
Tokyo 141 (JP)

(72) Inventors:

- Oberschmidt, Gerald, Dr.-Ing.,  
Sony International  
Stuttgarter Strasse 106, 70736 Fellbach (DE)

- Kruzevcevic, Dragan, Dr.-Ing., Sony International  
Stuttgarter Strasse 106, 70736 Fellbach (DE)
- Brankovic, Veselin, Dr.-Ing., Sony International  
Stuttgarter Strasse 106, 70736 Fellbach (DE)
- Korschak, Tino, Sony International  
Stuttgarter Strasse 106, 70736 Fellbach (DE)
- Abe, Masayoshi, Sony Materials Research Labs.  
Hodogaya-ku, Yokohama-shi (JP)
- Dölle, Thomas,  
Sony International (Europe) GmbH.  
Stuttgarter Strasse 106, 70736 Fellbach (DE)

(74) Representative: Rupp, Christian, Dipl.Phys. et al  
Mitscherlich & Partner  
Patent- und Rechtsanwälte  
Sonnenstrasse 33  
80331 München (DE)

## (54) Calibration of a N-port receiver

(57) A technique for calibrating a N-port receiver, such as for example a 5- or 6-port receiver is proposed. The N-port receiver (1) comprises a first input (2) for a RF signal to be detected, a second input (3) for a RF signal originating from a local oscillator (4) and N-2 output terminals. Calibrating signals are generated on the basis of the RF signal supplied by the local oscillator (4). The calibration signals are fed to the first input (2) and/or the second input (3) of the N-port receiver (1). Calibration coefficients are calculated on the basis of the output signals generated by the N-port receiver (1) in response to the feeding of the calibration signals. The calibration signals are unmodulated signals and are only processed by means of a passive RF circuitry in the calibration device (100).

The solutions according to the present invention allow a simple calibration of N-port receivers, which can be used as IQ demodulators or converters. Thereby a local oscillator (4) is used as a RF source for the calibration.

FIG 1A

